RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/734,372

Source: Cipe

Date Processed by STIC: 12-30-03

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 703-308-4212; FAX: 703-308-4221
Effective 12/13/03: TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 4.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

http://www.uspto.gov/web/offices/pac/checker/chkr41note.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>, EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to (EFFECTIVE 12/01/03): U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 10/08/03

Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION	SERIAL NUMBER: 10/734,372

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1 ____ Wrapped Nucleics
   Wrapped Aminos
The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."

2 ____ Invalid Line Length
The rules require that a line not exceed 72 characters in length. This includes white spaces.

3 ____ Misaligned Amino
   Numbering
The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.

4 ____ Non-ASCII
The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.

5 ____ Variable Length
Sequence(s) ____ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.

6 ____ PatentIn 2.0
   "bug"
A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.

7 ____ Skipped Sequences
   (OLD RULES)
Sequence(s) ____ missing. If intentional, please insert the following lines for each skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
(i)   SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped

Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.

8 ____ Skipped Sequences
   (NEW RULES)
Sequence(s) ____ missing. If intentional, please insert the following lines for each skipped sequence.
<210> sequence id number
<400> sequence id number
000

9 ____ Use of n's or Xaa's
   (NEW RULES)
Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

10 X Invalid <213>
   Response
Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence

11 ____ Use of <220>
Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32)   (Sec. 1.823 of Sequence Rules)

12 ____ PatentIn 2.0
   "bug"
Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

13 ____ Misuse of n/Xaa
"n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid

AMC – Biotechnology Systems Branch – 09/09/2003

IFWO

RAW SEQUENCE LISTING   DATE: 12/30/2003
PATENT APPLICATION: US/10/734,372   TIME: 13:40:44

        Input Set : A:\parkinsonsutility.ST25.txt
        Output Set: N:\CRF4\12302003\J734372.raw

```
 3 <110> APPLICANT: St. Jude Children's Research Hospital
 4        University of Tennessee Research Corporation
 5        Smeyne, Richard J.
 6        Tharp, Ruby
 7        Smeyne, Michelle
 8        Williams, Robert
10 <120> TITLE OF INVENTION: Method for Determining Sensitivity to Environmental Toxins
and
11        Susceptibility to Parkinson's Disease
13 <130> FILE REFERENCE: 023868.43877
```
C--> 15 <140> CURRENT APPLICATION NUMBER: US/10/734,372
C--> 15 <141> CURRENT FILING DATE: 2003-12-12
```
15 <150> PRIOR APPLICATION NUMBER: 60/433,437
16 <151> PRIOR FILING DATE: 2002-12-13
18 <160> NUMBER OF SEQ ID NOS: 71
20 <170> SOFTWARE: PatentIn version 3.2
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 630
24 <212> TYPE: DNA
25 <213> ORGANISM: Mus sp.
27 <400> SEQUENCE: 1
28 atgccgccgt acaccattgt ctacttccca agtcgagggc ggtgtgaggc catgcgcatg    60
30 ctgctgactg accagggcca gagctggaag gaggaggtgg ttaccataga tacctggatg   120
32 caaggcttgc tcaagcccac ttgtctgtat gggcagcttc ctaagtttga ggatggagac   180
34 ctcacccttt accaatctaa tgccatcttg agacaccttg gccgctcttt ggggctttat   240
36 gggaaaaacc agagggaggc cgcccaggtg gatatggtga atgatggggt agaggacctt   300
38 cgcggcaaat atggcaccat gatctacaga aactatgaga atggtaagaa tgactacgtg   360
40 aaggccctgc ctgggcatct gaagcctttt gagaccctgc tgtcccagaa ccagggaggc   420
42 aaagctttca tcgtgggtga ccagatctcc tttgccgatt acaacttgct ggacctgctg   480
44 ctgatccacc aagtcctggc ccctggctgc ctggacaact tcccccctgct ctctgcctat   540
46 gtggctcgcc tcagtgcccg gcccaagatc aaggccttcc tgtcctcccc ggaacatgtg   600
48 aaccgtccca tcaatggcaa tggcaaacag                                      630
51 <210> SEQ ID NO: 2
52 <211> LENGTH: 350
53 <212> TYPE: DNA
54 <213> ORGANISM: Mus sp.
56 <400> SEQUENCE: 2
57 ggccatgcgc atgctgctga ctgaccaggg ccagagctgg aaggaggagg tggtgggcag    60
59 cttcctaagt ttgaggatgg agacctcacc ctttaccaat gactacgtga aggccctgcc   120
61 tgggcatctg aagcctttg agaccctgct gtcccagaac cagggaggca acagatctcc   180
63 tttgccgatt acaacttgct ggacctgctg ctgatccacc aagtcctggc ccctggctgc   240
65 ctggacaact tccccctgct ctctgcctat gtggctcgcc tcagtgcccg gcccaagatc   300
67 aaggccttc tgtcctcccc ggaacatgtg aaccgtccca tcaatggcaa                 350
70 <210> SEQ ID NO: 3
```

Does Not Comply
Corrected Diskette Needed
P.2-5

RAW SEQUENCE LISTING   DATE: 12/30/2003
PATENT APPLICATION: US/10/734,372   TIME: 13:40:44

Input Set : A:\parkinsonsutility.ST25.txt
Output Set: N:\CRF4\12302003\J734372.raw

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 71 <211> LENGTH: 350
 72 <212> TYPE: DNA
 73 <213> ORGANISM: Homo sapiens
 75 <400> SEQUENCE: 3
 76 ggccctgcgc atgctgctgg cagatcaggg ccagagctgg aaggaggagg tggtgggcag      60
 78 ctccccaagt tccaggacgg agacctcacc ctgtaccaat gactatgtga aggcactgcc     120
 80 cgggcaactg aagccttttg agaccctgct gtcccagaac cagggaggca acagatctcc     180
 82 ttcgctgact acaacctgct ggacttgctg ctgatccatg aggtcctagc ccctggctgc     240
 84 ctggatgcgt tcccctgct ctcagcatat gtggggcgcc tcagtgcccg gcccaagctc     300
 86 aaggccttcc tggcctcccc tgagtacgtg aacctcccca tcaatggcaa             350
 89 <210> SEQ ID NO: 4
 90 <211> LENGTH: 630
 91 <212> TYPE: DNA
 92 <213> ORGANISM: Mus sp.
 94 <400> SEQUENCE: 4
 95 atgccaccat acaccattgt ctacttccca gttcgagggc ggtgtgaggc catgcgaatg      60
 97 ctgctggctg accagggcca gagctggaag gaggaggtgg ttaccataga tacctggatg     120
 99 caaggcttgc tcaagcccac ttgtctgtat gggcagctcc ccaagtttga ggatggagac     180
101 ctcacccttt accaatctaa tgccatcttg agacaccttg gccgctcttt ggggctttat     240
103 gggaaaaacc agagggaggc cgcccagatg gatatggtga atgatggggt ggaggacctt     300
105 cgcggcaaat atgtcaccct catctacacc aactatgaga atggtaagaa tgactacgtg     360
107 aaggccctgc ctgggcatct gaagccttt gagaccctgc tgtcccagaa ccagggaggc     420
109 aaagctttca tcgtgggtga ccagatctcc tttgccgatt acaacttgct ggacctgctg     480
111 ctgatccacc aagtcctggc ccctggctgc ctggacaact tccccctgct ctctgcctat     540
113 gtggctcgcc tcagtgcccg gcccaagatc aaggcctttc tgtcctcccc ggaacatgtg     600
115 aaccgtccca tcaatggcaa tggcaaacag                                     630
118 <210> SEQ ID NO: 5
119 <211> LENGTH: 26
120 <212> TYPE: DNA
121 <213> ORGANISM: Synthetic
124 <220> FEATURE:
125 <221> NAME/KEY: featureMiscellaneous
126 <222> LOCATION: (1)..(26)
127 <223> OTHER INFORMATION: Primer
129 <400> SEQUENCE: 5
130 gcacttgcca gcttcaggtg aattca                                          26
133 <210> SEQ ID NO: 6
134 <211> LENGTH: 26
135 <212> TYPE: DNA
136 <213> ORGANISM: Synthetic
139 <220> FEATURE:
140 <221> NAME/KEY: Miscellaneousfeature
141 <222> LOCATION: (1)..(26)
142 <223> OTHER INFORMATION: Primer
144 <400> SEQUENCE: 6
145 gtcaggtagc ttcaggcaga accaca                                          26
148 <210> SEQ ID NO: 7
149 <211> LENGTH: 15
150 <212> TYPE: DNA
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W--> 125
W--> 140

[handwritten annotations: "see item 10 on error summary report." near line 121; "space" near line 126; "(space)" near line 141]

RAW SEQUENCE LISTING   DATE: 12/30/2003
PATENT APPLICATION: US/10/734,372   TIME: 13:40:44

Input Set : A:\parkinsonsutility.ST25.txt
Output Set: N:\CRF4\12302003\J734372.raw

```
    151 <213> ORGANISM: synthetic
    154 <220> FEATURE:
W-->155 <221> NAME/KEY: feature miscellaneous
    156 <222> LOCATION: (1)..(15)
    157 <223> OTHER INFORMATION: GSTpi2 5'primer
    159 <400> SEQUENCE: 7
    160 cacctgggcc gctcc                                              15
    163 <210> SEQ ID NO: 8
    164 <211> LENGTH: 19
    165 <212> TYPE: DNA
    166 <213> ORGANISM: synthetic
    169 <220> FEATURE:
    170 <221> NAME/KEY: misc_feature
    171 <222> LOCATION: (1)..(19)
    172 <223> OTHER INFORMATION: GSTpi2 3'primer
    174 <400> SEQUENCE: 8
    175 tgtccaccag tgctgcctc                                          19
    178 <210> SEQ ID NO: 9
    179 <211> LENGTH: 25
    180 <212> TYPE: DNA
    181 <213> ORGANISM: synthetic          same error
    184 <220> FEATURE:
    185 <221> NAME/KEY: misc_feature
    186 <222> LOCATION: (1)..(25)
    187 <223> OTHER INFORMATION: GSTpi2 labeling primer
    189 <400> SEQUENCE: 9
    190 tcgggctcta tggcaaagac caaca                                   25
    193 <210> SEQ ID NO: 10
    194 <211> LENGTH: 16
    195 <212> TYPE: DNA
    196 <213> ORGANISM: synthetic
    199 <220> FEATURE:
    200 <221> NAME/KEY: misc_feature
    201 <222> LOCATION: (1)..(16)
    202 <223> OTHER INFORMATION: GSTp1a/1b 5' primer
    204 <400> SEQUENCE: 10
    205 tgtgaggcca tgcgca                                             16
    208 <210> SEQ ID NO: 11
    209 <211> LENGTH: 21
    210 <212> TYPE: DNA
    211 <213> ORGANISM: synthetic
    214 <220> FEATURE:
    215 <221> NAME/KEY: misc_feature
    216 <222> LOCATION: (1)..(21)
    217 <223> OTHER INFORMATION: GSTp1a/1b 3'primer
    219 <400> SEQUENCE: 11
    220 tggtaaccac ctcctccttc c                                       21
    223 <210> SEQ ID NO: 12
    224 <211> LENGTH: 24
```

RAW SEQUENCE LISTING   DATE: 12/30/2003
PATENT APPLICATION: US/10/734,372   TIME: 13:40:44

Input Set : A:\parkinsonsutility.ST25.txt
Output Set: N:\CRF4\12302003\J734372.raw

```
225 <212> TYPE: DNA
226 <213> ORGANISM: synthetic
229 <220> FEATURE:
230 <221> NAME/KEY: misc_feature
231 <222> LOCATION: (1)..(24)
232 <223> OTHER INFORMATION: GSTp1a/1b labeling primer
234 <400> SEQUENCE: 12
235 ctgctgactg accagggcca gagc                                        24
238 <210> SEQ ID NO: 13
239 <211> LENGTH: 18
240 <212> TYPE: DNA
241 <213> ORGANISM: synthetic
244 <220> FEATURE:
245 <221> NAME/KEY: misc_feature
246 <222> LOCATION: (1)..(18)
247 <223> OTHER INFORMATION: GST alpha yc 5' primer
249 <400> SEQUENCE: 13
250 caggctgagc agggctga                                               18
253 <210> SEQ ID NO: 14
254 <211> LENGTH: 17
255 <212> TYPE: DNA
256 <213> ORGANISM: synthetic        Same error
259 <220> FEATURE:
260 <221> NAME/KEY: misc_feature
261 <222> LOCATION: (1)..(17)
262 <223> OTHER INFORMATION: GST alpha yc 3' primer
264 <400> SEQUENCE: 14
265 gcccgggtcc agctctt                                                17
268 <210> SEQ ID NO: 15
269 <211> LENGTH: 30
270 <212> TYPE: DNA
271 <213> ORGANISM: synthetic
274 <220> FEATURE:
275 <221> NAME/KEY: misc_feature
276 <222> LOCATION: (1)..(30)
277 <223> OTHER INFORMATION: GST alpha yc primer
279 <400> SEQUENCE: 15
280 attgccctgg ttgaactcct ctaccatgtg                                  30
283 <210> SEQ ID NO: 16
284 <211> LENGTH: 16
285 <212> TYPE: DNA
286 <213> ORGANISM: synthetic
289 <220> FEATURE:
290 <221> NAME/KEY: misc_feature
291 <222> LOCATION: (1)..(16)
292 <223> OTHER INFORMATION: GST alpha GT41A 5' primer
294 <400> SEQUENCE: 16
295 gcaatggccg ggaagc                                                 16
298 <210> SEQ ID NO: 17
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RAW SEQUENCE LISTING   DATE: 12/30/2003
PATENT APPLICATION: US/10/734,372   TIME: 13:40:44

Input Set : A:\parkinsonsutility.ST25.txt
Output Set: N:\CRF4\12302003\J734372.raw

```
299 <211> LENGTH: 21
300 <212> TYPE: DNA
301 <213> ORGANISM: synthetic
304 <220> FEATURE:
305 <221> NAME/KEY: misc_feature
306 <222> LOCATION: (1)..(21)
307 <223> OTHER INFORMATION: GST alpha GT41A 3' primer
309 <400> SEQUENCE: 17
310 acctgatgca ctccattctg c                                        21
313 <210> SEQ ID NO: 18
314 <211> LENGTH: 25
315 <212> TYPE: DNA
316 <213> ORGANISM: synthetic
319 <220> FEATURE:
320 <221> NAME/KEY: misc_feature
321 <222> LOCATION: (1)..(25)
322 <223> OTHER INFORMATION: GST alpha GT41A labeling primer
324 <400> SEQUENCE: 18
325 cgtgcttcac tacttcaatg cccgg                                     25
328 <210> SEQ ID NO: 19
329 <211> LENGTH: 22
330 <212> TYPE: DNA
331 <213> ORGANISM: synthetic        same error
334 <220> FEATURE:
335 <221> NAME/KEY: misc_feature
336 <222> LOCATION: (1)..(22)
337 <223> OTHER INFORMATION: GST mu(chr1) 5' primer
339 <400> SEQUENCE: 19
340 caggcacctt atattcgaac cc                                        22
343 <210> SEQ ID NO: 20
344 <211> LENGTH: 18
345 <212> TYPE: DNA
346 <213> ORGANISM: synthetic
349 <220> FEATURE:
350 <221> NAME/KEY: misc_feature
351 <222> LOCATION: (1)..(18)
352 <223> OTHER INFORMATION: GST mu(chr1) 3' primer
354 <400> SEQUENCE: 20
355 cgcaggccac aaagtcct                                             18
358 <210> SEQ ID NO: 21
359 <211> LENGTH: 26
360 <212> TYPE: DNA
361 <213> ORGANISM: synthetic
364 <220> FEATURE:
365 <221> NAME/KEY: misc_feature
366 <222> LOCATION: (1)..(26)
367 <223> OTHER INFORMATION: GST mu(chr1) labeling primer
369 <400> SEQUENCE: 21
370 cgtgcctgga tgccttccta aacctg                                    26
```

The type of errors shown exist throughout
the Sequence Listing. Please check subsequent
sequences for similar errors.

VERIFICATION SUMMARY   DATE: 12/30/2003
PATENT APPLICATION: · **US/10/734,372**   TIME: 13:40:45

Input Set : **A:\parkinsonsutility.ST25.txt**
Output Set: **N:\CRF4\12302003\J734372.raw**

L:15 M:270 C: Current Application Number differs, Replaced Current Application No
L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:125 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:5
L:140 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:6
L:155 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:7